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Trans-cervical resection of the endometrium: the first four years' experience at the Belfast City Hospital

D C Hunter, H R McClelland

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SUMMARY

We have evaluated the quality of service provided in performing trans cervical resection of the endometrium (TCRE) in the treatment of women presenting with menstrual dysfunction.

Of the 78 patients who underwent TCRE, ten had, at the time of writing, subsequently undergone hysterectomy. A chart review was carried out on those patients. Two others were on the waiting list for hysterectomy. Sixty-one of 68 (90%) patients responded to the postal questionnaires. Of these, 50 (82%) were satisfied with the result of the procedure. Twenty-three (38%) were rendered amenorrhoeic. Thirty-eight still had bleeding, but of these, 19 (31%) had very light regular periods and 13 (21%) had only an occasional stain. Overall, 90% of women felt that there had been an improvement in their bleeding. Six (10%) women claimed that there had been no improvement.

TCRE is a safe and effective alternative to hysterectomy or medical treatment for the treatment of menstrual dysfunction.

INTRODUCTION

Since its introduction in 1983[1] TCRE has become an increasingly popular treatment for menstrual disorders, in particular, for menorrhagia. Although patient satisfaction rates are lower than for hysterectomy,[2] operative hysteroscopy provides a suitable alternative to medical therapy in women wishing to avoid hysterectomy. The technique, once learned, is relatively simple, with average operating times of approximately 20 minutes.

Complications occur most frequently when learning the procedure, but with experience, complication rates of less than 2% are reported.[3,4] Those which occur most frequently are fluid overload and uterine perforation.

TCRE is both cost effective and clinically efficacious in the treatment of menstrual disorders.[5] The equipment used costs considerably less to install than for laser endometrial ablation and is more readily available than radiofrequency thermal inducers. Another advantage is that it provides specimens for histopathological analysis, where laser ablation, radiofrequency ablation, and thermal balloon ablation do not.

It has been shown in the Scottish Hysteroscopy Audit Group study that TCRE has a significant role to play in the management of menorrhagia.[6] This retrospective study set out to establish the quality of service provided when TCRE is performed for the treatment of menorrhagia at the Belfast City Hospital.

METHODS

All women who attended the Gynaecology clinic of H R McClelland complaining of menorrhagia are offered hysteroscopic surgical treatment as an additional choice between medical treatment and hysterectomy. Seventy-eight women who underwent TCRE in the Belfast City Hospital between January 1992 and June 1995 were identified through computerised procedure coding.

Belfast City Hospital, Lisburn Road, Belfast BT9 7AB.

David C Hunter, MB, BAO, Specialist Registrar, Obstetrics and Gynaecology.

H Raymond McClelland, MB, MRCOG, Consultant Obstetrician and Gynaecologist.

Correspondence to Dr McClelland.

All patients had endometrial preparation with either two or three doses of goserelin 3.6mg administered 28 days apart. The procedures were performed according to a standard resection technique, using a 5mm resection loop. The uterine fundus and cornua were treated with a 5mm rollerball in all but two cases, in whom a 3mm resection loop and rollerball were used. The smaller resection loop, although theoretically safer, can be problematic as the endometrial gland depth can be as deep as 4mm and at least this depth of resection is required to ensure complete resection of the endometrium.[7] Thermal injury to glands below the 3mm depth of resection cannot guarantee their destruction.

A postal questionnaire was sent to each of the sixty-eight patients who had not subsequently undergone hysterectomy. Patients were asked to describe their menstrual cycle, menstrual blood loss, and dysmenorrhoea both prior to and following TCRE. The women were also invited to comment on the procedure and on any benefit or disadvantage they could perceive.

Six of the seven patients who failed to return a questionnaire were contacted by telephone. The seventh patient could not be contacted.

The ten patients who undergone hysterectomy were not contacted but a careful chart review was made to determine the indication for hysterectomy.

RESULTS

Sixty-one postal questionnaires were returned completed and six of the seven non-responders were contacted by telephone. The average age of the patients was 42.2 years, range 27-53.

Fifty four (80%) complained that their bleeding was excessive, thirteen (20%) complained of heavy bleeding and dysmenorrhoea. Twenty-eight had either very irregular bleeding or a cycle length of less than 24 days. The duration of bleeding was variable, but in 50 women it was more than seven days.

Six women (10%) had no improvement in their bleeding pattern. If women with slight staining are included in the group reporting amenorrhoea, 39 (58%) were rendered amenorrhoeic. Twenty-two (32%) had regular light periods.

Of the thirteen women who had pain as a significant symptom, eight (62%) experienced either minimal or no dysmenorrhoea post-operatively. Ten (15%) women reported that they experienced significant dysmenorrhoea following the procedure, five of whom had not reported pain pre-operatively. One of these women claimed to be in constant pain; this was not due to haematometra.

In one patient (who had undergone two previous Caesarean sections), uterine perforation occurred as the scope was re-introduced following the resection; she underwent hysterectomy. No extra-uterine visceral damage was noted. In two women intra-operative haemorrhage was not easily controlled with diathermy; however, uterine tamponade with the inflated balloon of a Foley catheter for 24 hours was sufficient to achieve haemostasis.

Twenty-seven women went home the day following surgery, 19 on day two, ten on day three; four patients remained in hospital for four or more days. Of these, one patient was transferred to a medical ward following a cerebrovascular accident. She had been on warfarin pre-operatively and was considered unfit for hysterectomy. Review of the post-operative time spent in hospital shows that latterly almost all patients were discharged on the first postoperative day. Earlier in the learning curve for the procedure caution dictated that patients remain in hospital under supervision for rather longer.

Ten women had undergone hysterectomy at the time of writing, one intra-operatively and nine others subsequently. Two of the nine complained of persistent heavy vaginal bleeding, three of dysmenorrhoea and four of dysmenorrhagia. Histopathological examination of the hysterectomy specimens showed adenomyosis in three, endometriosis in two, fibroids in two, tubal adhesions in one and hydrosalpinx in one. The length of time for TCRE to hysterectomy ranged from eight to 30 months. All of these patients were considered to be dissatisfied, although only two were dissatisfied because of continuing heavy bleeding. Two others were on the waiting list for hysterectomy, one who had severe constant pain, and one who complained of dysmenorrhoea.

Outcome was not dependent on duration of menses, duration or severity of bleeding or regularity of the cycle.

DISCUSSION

Minimally invasive surgical techniques have become increasingly popular with the reduction

in the number of hospital beds available and the demand for increased turnover of patients. Patients are more aware of minimally invasive surgical techniques and many inquire regarding this. Since its development through the 1980s the technique of transcervical resection of the endometrium has remained basically unchanged. The introduction of fluid management systems (costing around £10,000) has been claimed to reduce fluid deficits,[8] but careful control of infusion pressure and shorter operating times achieved by experienced surgeons limit the need for such technology. No cases of fluid overload (deficit >1.5L) were noted in this series when a gravitational infusion system was used.

Strict selection criteria have been shown in a number of studies to be of paramount importance, not only in achieving good objective results, but also in achieving high patient satisfaction rates. Selection criteria include: completed family, a wish to avoid or contra indication to hysterectomy, no coexistent gynaecological pathology, and a normal smear within three years.[3] The presence of dysmenorrhoea has not been shown in other studies to affect the degree of patient satisfaction.[2,6] Counselling regarding dysmenorrhoea post-operatively is also of importance. Eight of 13(61%) women in the series above were considerably relieved of pain; however, five of 48(11%) who had not experienced dysmenorrhoea pre-operatively reported this symptom post-operatively.

Thorough counselling of women is needed pre-operatively to minimise post-operative disappointment in the bleeding pattern achieved. Hysterectomy remains the only surgical technique which guarantees amenorrhoea; however, hysterectomy does not guarantee patient satisfaction. Minimally invasive surgical techniques should not, therefore, be offered to women who are adamant that amenorrhoea is the desired result. Results from follow-up for more than four years can now be reported to women requesting TCRE at this unit, and if truthful estimates of likely outcomes are given, dissatisfaction is less likely. Results from the most-recently performed procedures indicate that with experience in operating, outcomes can be expected to improve.

Complications occur intra-operatively and post-operatively. In this series there were two cases of mild intra-operative haemorrhage, one case of uterine perforation and no cases of fluid overload. This compares favourably with other authors.[9,10] Both cases of mild haemorrhage were controlled by tamponade with a Foley catheter and neither patient required blood transfusion. Post operative endometritis did not occur in this series but is a recognised complication.[11]

Concerns regarding long-term healing have been voiced. Most benign is the recurrence of abnormal bleeding, which has been quoted at 22.5% of patients at five years; however, more sinister is the possibility of the masking of malignant change in residual islands of endometrium.[12]

Transcervical resection of the endometrium is a safe and effective treatment for menorrhagia. It can be offered to women as an alternative to medical or more radical surgical therapies and is not associated with the side effects of hormone preparations and long-term morbidity of invasive surgery. Unlike medical treatments, it can achieve a long-term cure. With shorter hospital stay than for hysterectomy, and more rapid convalescence, the financial cost to both hospital and the patient is potentially considerably less than for invasive procedures. The quality of the service provided at the Belfast City Hospital is comparable to that of teaching units elsewhere, with 15% hysterectomy rates following conservative surgery.

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